

PLANNING AND IMPLEMENTING PROGRAM EVALUATIONS WITHIN THE OFFICE OF SOLID WASTE

Program evaluation can be an important and useful tool for program management. This paper lays out a strategy for planning and conducting program evaluations for the RCRA program. This strategy includes

- definitions and descriptions of program evaluation,
- a discussion of the rationale for conducting evaluations, and a summary and potential applications for evaluation, and
- proposed procedures for identifying candidate programs for evaluation and for conducting program evaluations in the RCRA program.

I BACKGROUND AND DEFINITIONS

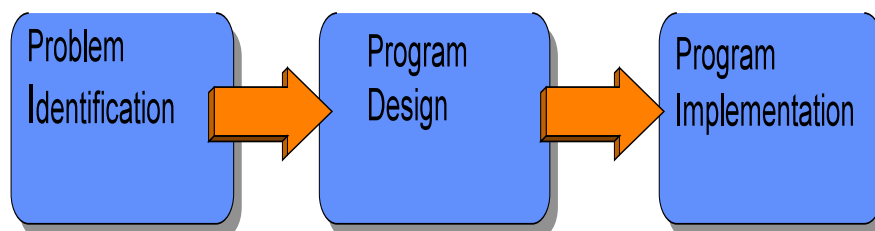
Program evaluation is defined ¹ as “an

objective and formal assessment of the results, impact, or effects of a program or policy.” Program evaluations also may examine the implementation (processes and/or results) and policies of the programs. A program evaluation will draw conclusions about the effectiveness of the design, implementation, and/or impacts of a program.

“Program” here includes the usual connotation of “a set of staff activities with a defined goal or purpose;” this is what GPRA terms “activities” to achieve goals and objectives. The term “program” may also include a policy initiative, an investment project, or even a change in procedures.

Purpose of Program Evaluation

Programs are often developed and implemented with a linear process that looks like this:



¹ Government Performance and Results Act of 1993: Report of the Committee on Governmental Affairs, United States Senate, to Provide for the Establishment, Testing, and Evaluation of Strategic Planning and Performance Measurement in the Federal Government, and for Other Purposes, p. 32.

“Implementation” is considered to be the last phase of the project. When implementation is over, the project is considered to be complete. If the process ends there, however, important questions are never answered: What were the results? Was the program effective? How did the program work?

Evaluation is the step that provides this information feedback. Evaluation is therefore a crucial (though often overlooked) function of program management. By providing a mechanism to allow management to monitor implementation of programs, program evaluation is a means to

- measure the success of a program
- communicate the strengths and advantages of programs
- identify potential improvements
- redirect resources to ensure effective use of staff time and funds.

Using program evaluation as a diagnostic tool can help improve our processes, make our work more efficient, and improve our ability to fulfill our statutory mission.

Types of Evaluations

There are three principal types of evaluations. Each is directed towards gaining a specific type of information, for a specific purpose.

Outcome evaluations examine the achievements of a program; they therefore are focused on the “big picture”: What are the outcomes of implementing a program? What are the intended and unintended results of implementing the program? What are the factors (both within and outside the Agency) that are responsible for achieving those outcomes? For example, the GPRA team is considering an evaluation of the outcomes of the Pay-as-You-Throw outreach program. Was the program successful in achieving

intended outcomes, including diverting wastes from landfills and reducing carbon emissions?

Process evaluations examine the operations and procedures of the program. How has the program been planned and implemented? What entities have taken part, what are their roles? How do the implementors and stakeholders interact, and how do these interactions affect the operation of the program? For example, the GPRA team is considering a process evaluation focusing on the Part 258 criteria for municipal landfills. What has been the process for implementing the regulations after promulgation by EPA? What has worked, and what hasn’t? Process evaluations might focus on headquarters activities (e.g., the process for listing hazardous wastes) or on Regional activities (e.g., the permitting process, or enforcement).

Formative evaluations are used in the earliest stages of a program, during the design phase or early in the implementation phase. These evaluations examine the intent of the program, and help assess features of program design and operating environment (including external factors) that influence the chances of successful achievement of program objectives. An essential feature of formative evaluations is identification of potential barriers to program success.

II THE ROLE OF PROGRAM EVALUATION IN THE RCRA PROGRAM

The GPRA specified certain roles for program evaluation within the framework of the performance measurement system the legislation requires. This section explains these roles, as well as other ways that program evaluation can be of benefit to the RCRA program.

Legislative Specifications within GPRA

Although the GPRA statute does not detail a required schedule of program evaluations, the law clearly presumes they will be conducted. The committee report accompanying the legislation and the legislation itself speak specifically of the role of program evaluations in the annual cycle of performance planning and reporting.

Strategic Plan: According to the GPRA, the 5-year strategic plan should contain a “description of the program evaluations used in establishing or revising general goals and objectives.” The legislation also guides the agency to include a schedule for future program evaluations to be conducted.

Annual Performance Report: The annual performance report itself renders a limited evaluative function. Referring to the program objectives and measures in the annual performance plan, the end-of-year performance report describes the agency’s activities during the year, and accounts for the degree to which objectives and measures have been accomplished. The legislation notes that the performance report “ could include results of program evaluations conducted during the course of a year.” The Government Operations Committee also explains how the performance report is to

account for program evaluations:

Finally, the reports should also relate performance measurement information to program evaluation findings, in order to give a clear picture of the agency’s performance and its efforts at improvement.²

Program Evaluation in Implementation of GPRA

The OSWER annual plan features a series of goals, objectives, and subobjectives. The goals are overarching missions for the Agency; the objectives represent broad targets at the AA level. The subobjectives are generally specific to RCRA programs.

The Annual Performance Plan also specifies the **activities** that will be conducted to accomplish these goals. (Using the systems framework, GPRA also refers to these activities as “outputs”). There is not necessarily a one-to-one correspondence between these activities and goals/ objectives/ subobjectives. In some cases, multiple activities are conducted to serve a particular subobjective; in other cases, a single activity contributes to several subobjectives.

Evaluation of these activities: One use of program evaluation in GPRA is to evaluate the relationship between these activities and subobjectives. Program evaluation may focus on the individual activity or an individual subobjective. For example, an evaluation might look at a single subobjective (for example, # 2.06 “Waste management facilities have approved controls”) and examine how a variety of programs (LDRs, new listings, permitting, etc.) are contributing to accomplishing the

² p. 16.

subobjective. Conversely, an evaluation might look at a single program (for example, WasteWise), to assess how it contributes to subobjective 7.03 (MSW recycling rates) as well as subobjective 7.04 (waste generation rates).

Clarification of Program Results: Each year, the Agency must account for progress on performance measures in a Performance Report. This report focuses on the relationship between EPA inputs (budget and FTEs), outputs (program activities), and outcomes (environmental results). Unfortunately, a simple tallying of numeric program measures and progress toward objectives may provide a ***misleading*** idea of program activities and achievements.

This opportunity for confusion largely exists because EPA may not have meaningful control over the “outcomes” that GPRA prefers us to measure, since many of our goals are dependent on actions by a number of public and private entities. For example, EPA is not able to ***cause*** generators to produce less waste; similarly, the quality of groundwater may be affected by many factors which are not accountable to activities conducted under the RCRA program (including releases which are not regulated under Subtitle C).

Despite the minimal level of influence that RCRA may have over these measures of environmental quality, EPA nevertheless needs to be able to explain the relationship between the activities of the RCRA program and the environmental outcomes. Measuring goals and progress alone won’t be sufficient to explain the intricacies of individual programs, or the role of external factors such as state actions, industry activities, economic factors, or legislative constraints.

Program evaluation can have a strategic value by providing clarifying explanation of the

performance results that appear in the annual performance report. The evaluation can describe and assess the various internal and external factors that affect program results, thus providing a clearer idea of program results.

Program Evaluation as a Management Tool

Program evaluation has been in use at all levels of government, prior to and outside of the enactment of GPRA. These agencies have seen program evaluation is a useful tool for managing programs and communicating results.

Program evaluation can facilitate program management by helping managers understand how programs are working: by identifying particularly successful aspects of projects and programs, managers may choose to divert resources to these more productive or fruitful activities. Evaluation may also identify external or exogenous factors, outside of the Agency’s control, that are hindering program success. By evaluating not only the extent but the ***reason*** for success, RCRA managers get valuable information to help adjust programs to improve progress toward achieving desired environmental outcomes.

Under the GPRA reporting framework, program evaluation can serve a communicative function, too, by demonstrating the value of programs (even those outside of formal GPRA reporting). A program evaluation might focus on a particular program (rather than a particular performance measure), and show how it contributes to achievement of various subobjectives. In other cases, RCRA may wish to highlight successes that are not directly related to GPRA objectives. Outside of program evaluation, there is little

opportunity to recognize the value of these programs.

III MANAGING PROGRAM EVALUATIONS

The GPRA team is proposing that OSW create a self-directed RCRA Program Evaluation Team to manage and conduct evaluations of RCRA programs. Since evaluations could cover all phases of planning and implementation of RCRA programs, the team should include members from both OSW and Regional RCRA staffs. One OSW special assistant should always be a member of the team, as well. The team will answer to the Deputy Office Director. The Program Evaluation Team will be responsible for

- identifying candidates for program evaluation,
- managing and oversee evaluations, and
- assisting program managers in understanding and acting on evaluation results and recommendations

Identifying Candidates for Program Evaluation

To identify information needs which could be answered by program evaluations, the program evaluation team will review the GPRA strategic plan, annual performance plans, annual performance reports, Division operating plans, and the Beginning-of-Year Plan. They may also review reports from the GAO, OIG, or other EPA offices. Other information needs may be discovered by polling management and staff on a formal or informal basis.

From all of these sources, the program evaluation team will develop a "long list" of candidate programs for evaluation. The team will meet periodically to review the list, and make a preliminary assessment of the

possible merit or significance of conducting an evaluation with reference to the value and feasibility of an evaluation. (see Figure 1). For each candidate program, the team will

Figure 1

Some Determinants of the Merit or Significance of a Program Evaluation

- Could this program use assistance in communicating its strengths and worth?
- How important is this program in reaching RCRA objectives?
- How much potential is there for improving outcomes and/or process?
- Have there been changes (or are changes anticipated) in the regulated industry, facilities, legislative decisions, budget, or other aspects of the operating environment that would make this a good time to examine the program?
- Does the program use a significant percentage of RCRA resources?
- How will the results of the evaluation help senior managers make better decisions?
- Do we expect that an evaluation of this program will identify potential program improvements?
- Has any source outside of RCRA requested an evaluation of this program?
- Does this program have areas that are suspected to be weak?
- Has this program received criticism that the program managers and others involved with RCRA would like to address?
- Will an evaluation of this program support reporting on progress toward GPRA goals?

identify the type of evaluation suggested, and the value that an evaluation could bring to the program or division.

The team will submit this “long list” of candidates for evaluation to OSW Senior Staff. When division directors submit their annual workplans to CIRMD each fall, they will also submit their preferred candidate programs to be evaluated in the upcoming year, with a rationale for each suggested program evaluation.

Selecting Candidates for Evaluation

The submissions from the division directors will constitute the “short list” of candidates for evaluation. The program evaluation team will meet (shortly after the submission of division workplans) to review and rank the candidates, and choose among them.

The team will use a formal or informal weighing and scoring process to recommend 1-3 evaluations each year. The scoring process will involve an assessment of the **value** and **feasibility** of conducting the evaluation. The feasibility will depend on question such as timing, the availability of relevant data, and the cost in time and funds to collect the data and complete a report.

Based on the criteria of value and feasibility, the program evaluation team will recommend candidates for evaluation. Their report to OSW senior staff will include recommendations for program evaluations, staff and resource needs, and projected time frames. The team will develop its report with assistance from program staff in the divisions. OSW senior staff will make the final decision

on programs to evaluate and will allocate appropriate funds to the team for these evaluations.

Conducting Evaluations

Staffing can be a difficult issue for internal program evaluations. The nature of the task requires independence and expertise.

Among the options available for staffing internal OSW program evaluations:

EPA staff : OSW personnel have the most expertise in the program, and would be able to identify issues and answers more quickly than anyone else. Objectivity and availability of time could be problematic issues in producing thorough evaluations.

Existing OSW mission contractors These contractors have significant expertise and understanding of OSW programs; they also have the easiest access to resources to conduct the evaluations. However, they likely have little expertise at conducting evaluations, and may not feel the independence necessary for an objective evaluation.

Independent Contracts (small purchases) : This mechanism could provide the most independence from management, and the widest latitude for evaluation and recommendations. It is likely that a contractor would be able to provide either expertise at evaluation, or expertise in RCRA issues, but probably not both. This mechanism could also be the most time-consuming to arrange.

The GPRA team recommends that program evaluations be conducted by OSW staff with contract support, where possible. OSW might also wish to investigate establishing program evaluation capacity jointly with other OSWER offices. This would have the

advantage of concentrating expertise in evaluation.

In all cases, the program evaluation team will have responsibility for managing, conducting guiding, and/or overseeing program evaluations. Evaluations will need a combination of knowledge of evaluation methodology and knowledge of the program itself. In addition to members of the program evaluation team, therefore, each evaluation will require at least 15-20 hours from OSW program staff, and 4-6 hours from division management to help guide the evaluation.

Since implementation of RCRA programs takes place at the Regional and state level, many evaluations are going to focus more on field activities than headquarters. We can expect that OSW participants will be more versed in the techniques and conduct of evaluations than Regional personnel, and will need to assist Regional personnel in managing those evaluations. It would be helpful to develop an understanding of program evaluation within RCRA's regional branches and divisions.

In most cases, OSW staff should be supported by contractor assistance. Contract resources could be critical in conducting evaluations. OSW will secure evaluation expertise in one of two ways:

1) Existing contract vehicles within OSW, or with other OSWER or EPA program offices.

2) The program evaluation team will secure expert services on an individual basis, as small purchase procurements.

Since evaluations will be selected and conducted on an **ad hoc** basis, resource needs will vary from year to year. When deciding how much to allocate for evaluations, the following issues need to be

considered:

- ▶ The level of resources expended should be commensurate with the benefit to be derived from the study results. The more important the answers, the more resources it is justifiable to devote to the study.
- ▶ What level of detail is necessary? If the evaluation is raising questions about causes and effects, how conclusive do results need to be?
- ▶ Travel could be a component of many evaluations. Since GPRA measures are focused on environmental outcomes, a major focus of any evaluation is program implementation to meet those outcomes. The majority of that implementation is taking place in the Regions and States. It will likely be necessary for investigation and review to take place in the Regions and States, as well.

If we use an outside consultant to conduct an evaluation, we anticipate that a program evaluation could cost between \$25,000-\$125,000. The great variation depends on the scope of the evaluation, the evaluation skill and RCRA background of the consultant, and the scope and travel issues noted above.

The number of evaluations to be conducted each year should depend on the importance of the information to be gained, as tempered by the availability of resources.